

<https://helda.helsinki.fi>

Nicholas of Cusa on Rational Perception

Kny, Christian

2018

Kny , C & Silva , J F 2018 , ' Nicholas of Cusa on Rational Perception ' , Bulletin de philosophie médiévale , vol. 59 , pp. 177-213 . <https://doi.org/10.1484/j.bpm.5.115835>

<http://hdl.handle.net/10138/306926>

<https://doi.org/10.1484/j.bpm.5.115835>

unspecified

submittedVersion

Downloaded from Helda, University of Helsinki institutional repository.

This is an electronic reprint of the original article.

This reprint may differ from the original in pagination and typographic detail.

Please cite the original version.

NICHOLAS OF CUSA ON RATIONAL PERCEPTION

Christian Kny and José Filipe Silva¹

(University of Helsinki/ERC RiP Project)

Abstract: Despite being one of the major figures in late medieval thought and being the subject of numerous studies, certain topics concerning the Cardinal Nicholas of Cusa (1401-1464) remain in need of further investigation. One of these is an aspect of his theory of cognition: his account of sense perception. It is our aim in this study to systematically look at his scattered remarks on the topic and make a number of suggestions as to the nature of his thought on how we come to know external things. It is not our purpose to offer a comprehensive account of his theory of cognition (for this, cf. C. KNY, *Kreative, asymptotische Assimilation*, forthcoming). Our focus in this article is on his account of perception and the specific claim that Nicholas develops a model whereby reason operates together with the senses in perceptual experience. Despite being tentative our claim is grounded on suggestions found in the scholarship on Cusanus; but these suggestions remain quite vague and in need of exploration. In this article, we closely examine the textual evidence and develop our claim based on this examination. In order to substantiate it, we proceed as follows: first, we consider the core theses on perception in several of Nicholas' works. Second, we bring these elements together and propose a reading of how perception is rational according to Cusanus. Despite being an academic outsider and employing terminology in a way that sometimes obstructs interpretive access, our paper shows that Nicholas is well-acquainted with the different traditions in the philosophy of perception, especially perspectivist optics and medieval Augustinianism. In addition, and as the result of the role he attributes to reason in our experience of the world, Cusanus occupies an important place in the history of the development of theories of perception.

Keywords: rationality, perception, assimilation, excitatio, species, activity, discrimination

Introduction

Nicholas of Cusa—short: Cusanus—holds a model of sense perception in which human beings, being confronted with *species*,² perceive by means of their *mens* acting through a corporeal spirit in the sense organs. For perception to come about, he posits two necessary conditions. First, an *excitatio* has to take place: *species* cause a perceiver to turn her attention towards the sensory object emitting these *species*. Second, once “excited”, sensory and rational powers are jointly employed in the subject of experience to perceive the sensory object that has caused the *excitatio*.

Looking at this brief summary, its proximity to what is currently being discussed as ‘active perception’ seems obvious.³ Although this proximity has been pointed out, however, there is

¹ christian.kny@helsinki.fi; jose.pereiradasilva@helsinki.fi. The authors would like to acknowledge funding from the European Research Council under the grant agreement n. 637747 for the project *Rationality in Perception: Transformations of Mind and Cognition 1250-1550*.

² *Species* in this medieval context mean sensory representations of properties of external objects. On this, see K.H. TACHAU, *Vision and Certitude in the Age of Ockham*. Leiden 1988, 3-81.

³ For a tentative general definition, see J.F. SILVA and M. YRJÖNSUURI, “The World as a Stereogram”, in *Active Perception in the History of Philosophy*, J.F. SILVA and Mikko YRJÖNSUURI, Dordrecht 2014, 1-7; for a definition applied to the medieval sources, see J.F. SILVA, “Medieval Theories of Active Perception: an Overview”, in *Active Perception in the History of Philosophy*, J.F. SILVA and Mikko YRJÖNSUURI, Dordrecht 2014, 117-146.

remarkably little research on Cusanus' account of sense perception. The existing research stays at surface level in two important regards: On the one hand, there is no detailed analysis of the key passages on perception in Cusanus' works. The interpretive claims which have been made thus are correct but of a rather general nature.⁴ On the other hand, recent developments of the scholarly discussions about 'active perception' are not taken into account.

By providing a detailed systematic examination of Cusanus' notion of sense perception, we pursue two complementary objectives in this paper: first, we will conduct the textual analysis necessary to make well-founded claims about how Cusanus conceives sense perception. Second, we will make clear what 'active perception' means with regard to Cusanus, in the process pointing out key aspects of the philosophical tradition Cusanus relies upon. The thesis we will argue for can be put as follows: Cusanus describes human perception as active in terms of a rational structuring of inward-bound sensory information that is concurrent and intricately connected with the sensory experience itself.

We will argue for this thesis in two sections. As there is no detailed analysis of Cusanus' account of sense perception yet, such an analysis makes up the first, and most extensive, section of this paper. While some of the systematic questions arising from Cusanus' statements about perception are discussed in this first section, the main question is raised in the second section: how exactly is rational perception to be understood with Cusanus? We conclude with a short summary of our results from these two sections.

I. Cusanus on Perception: Textual Analysis

Cusanus does not offer a single, unified account of sense perception. He brings the issue up in different works and contexts, often in the form of brief remarks. There are, however, a few works in which he goes into some detail regarding sense perception, most notably *Idiota de mente* and the *Compendium*. We will focus on these two in our analysis, complementing the examination with a (briefer) look at a few important passages from *De coniecturis*.

(a) *Idiota de mente*

⁴ Research on Cusanus' notion of sense perception can be divided into two groups. On the one hand, there are contributions ascribing a model of active perception to Cusanus—cf. C.L. MILLER, "Cusanus, Nicolaus [Nicolas of Cusa]", in *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), ed. E.N. ZALTA (<https://plato.stanford.edu/archives/sum2017/entries/cusanus/>); C. LEIJENHORST, "Active Perception from Nicholas of Cusa to Thomas Hobbes", in *Active Perception in the History of Philosophy*, J.F. SILVA and Mikko YRJÖNSUURI, Dordrecht 2014, 176; L. SPRUIT, *Species intelligibilis. From Perception to Knowledge. Volume Two: Renaissance Controversies, Later Scholasticism, and the Elimination of the Intelligible Species in Modern Philosophy* (Brill's Studies in Intellectual History 49), Leiden 1995, 20-28; J. HOPKINS, *Nicholas of Cusa on Wisdom and Knowledge*, Minneapolis 1996, 27-31 (in a more Aristotelian spirit than other interpreters). On the other hand, there is a discussion mostly limited to the German research community about the role of sense perception in the wider epistemic framework Cusanus portrays—cf. I. Bocken, "Perspektiven der Theorie. Philosophie als scientiae aenigmatica bei Nicolaus Cusanus", in *Spiegel und Porträt. Zur Bedeutung zweier zentraler Bilder im Denken des Nicolaus Cusanus. Festgabe für Klaus Reinhardt zum 70. Geburtstag* (Veröffentlichungen des Cusanus-Studien-Centrums 5), Maastricht 2005, 31-39; K. KREMER, "Erkennen bei Nikolaus von Kues. Apriorismus—Assimilation—Abstraktion", in *Praegustatio naturalis sapientiae. Gott suchen mit Nikolaus von Kues*, ed. K. KREMER (Buchreihe der Cusanus-Gesellschaft. Sonderausgabe), Münster 2004, 7-14; T. VAN VELTHOVEN, *Gottesschau und menschliche Kreativität*, Leiden 1977, 107-109. It is not entirely surprising that there is no detailed account of sense perception in this second group; their focus is less on perception in and of itself, and more on its function regarding the "higher" epistemic activities. It is surprising, however, that there is no detailed account of sense perception in the first group; interpretive claims about sense perception in and of itself are made, but the textual analysis these claims rest upon is not particularly extensive.

Idiota de mente (*De mente*, hereafter), written in 1450, is a made-up conversation between a layman (the key figure the work is named after), a philosopher, and an orator. In it, Cusanus discusses the human *mens*, which under certain aspects he refers to as soul,⁵ both from ontological and epistemological points of view. Among the latter are descriptions of the different epistemic functions humans can engage in. After the layman has presented these activities, Cusanus lets the philosopher summarise “how the physicians think that sensations come about”⁶.

According to this summary, perception requires the existence of a sensory object, an external medium, a sensory organ, blood, a corporeal *spiritus* and the soul. These components interact with and make use of each other as follows: At the initiative of the perceiver’s soul, the corporeal *spiritus* moves through the blood to reach the sensory organs. There, sensory objects are encountered in a medium whose material constitution is proportioned to a given sense modality. Fire, (pure or thick) air, water, and earth are the media assigned to the senses, hierarchically ordered from vision to touch. Now when a sensory object is encountered, it is encountered as an obstacle. The corporeal *spiritus* is impeded in its motion by this obstacle; the soul, using the *spiritus* as its instrument, is made to notice that something is happening on its interface with the external world. Nicholas describes this as an ‘*excitatio*’:

[DM1] [W]hen being confronted with a certain external object, the spirit is turned back and the soul is stimulated (*excitatur*) to take note of that which stands in the way.⁷

In order to make sense of the *excitatio*—described as the *mens* being woken up⁸—, the perceiver employs her perceptual capacities.⁹ Explaining, in the voice of the philosopher, what happens within a perceiver when perceiving something, Cusanus says:

[DM2] if there is an obstacle, then that spirit (which is the instrument of the senses) is impeded and the soul—as if impeded—apprehends confusedly (*confuse*) through the senses the thing that stands in its way. For in and of themselves the senses demarcate nothing. That we, when we see something, impose a demarcation on it is not due to the sense but to the imagination, which is conjoined (*adiuncta*) to the sense.¹⁰

As the philosopher describes it here, the process of perceptual experience consists of two constitutive moments or stages. First, there is being affected by a sensory object—the corporeal spirit as the instrument of the soul’s action encounters and is impeded by an obstacle that has an inward-bound nature, i.e. that comes from the outside. The important thing to keep in mind here is that this affection is described not simply as the action of something external on the senses, but as that external thing being present to the senses and

⁵ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.1 n.57, ed. R. STEIGER, in *Nicolai de Cusa Opera Omnia, iussu et auctoritate Academiae Litterarum Heidelbergensis ad codicum fidem edita (h²V)*, Hamburg 1983 for the relation between *mens* and soul in *De mente*. Cf. p. 8sq. below.

⁶ NICOLAUS CUSANUS, *Idiota de mente* c.8 n.112, ed. R. STEIGER: “Optarem te, philosophe, audire, quomodo physici opinentur sensationes fieri”. English translations of the Latin text are based on those by J. Hopkins (freely accessible in the section “Übersetzungen” on <http://www.cusanus-portal.de>) and have been modified for clarification purposes when needed.

⁷ NICOLAUS CUSANUS, *Idiota de mente* c.8 n.113, ed. R. STEIGER: “Cum ergo aliquod exterius obstaculum invenit, repercutitur spiritus ille, et excitatur anima ad perpendendum illud, quod obstat”.

⁸ NICOLAUS CUSANUS, *Idiota de mente* c.5 n.85, ed. R. STEIGER: “in nostris mentis ab initio vita [...] similis est dormienti, quousque admiratione, quae ex sensibilibus oritur, excitetur, ut moveatur”.

⁹ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.8 n.112sq., ed. R. STEIGER.

¹⁰ NICOLAUS CUSANUS, *Idiota de mente* c.8 n.114, ed. R. STEIGER: “Unde fit, ut aliqua re obstante spiritus ille, qui sentiendi instrumentum est, tardetur et anima quasi tarda rem illam, quae obstat, confuse per sensus ipsos comprehendat. Sensus enim, quantum in se est, nihil terminat. Quod enim, cum aliquid videmus, terminum in ipso ponimus, illud quidem imaginationis est, quae adiuncta est sensui, non sensus”.

thus preventing or blocking the motion of the corporeal spirit operating under the direction and initiative of the soul. The second moment or stage is the act of discrimination. As senses themselves grasp their obstacles in an indeterminate, confused way, the indeterminate content they provide needs to be ordered for perception to be *of* some *thing*. This second task is performed by the *imaginatio*—and, with a higher level of differentiation, by the *ratio*.¹¹

To which extent is this core account of sense perception further fleshed out in the *De mente*? As a preliminary point, a limitation of human cognition has to be mentioned here. Cusanus characteristically claims throughout his works that any attempt of trying to gain knowledge of something not created by humans is a process of assimilation¹² that never entirely reaches its goal.¹³ As this thesis applies to all epistemic activities humans can perform, it necessarily applies to sense perception as well. Whatever exactly happens in perception, therefore, cannot yield full or exhaustive perceptual access to what is perceived.

With this general limitation in mind, we can move on to the specifics of sense perception. First, there is the obstacle affecting the senses and thus impeding the corporeal *spiritus*. In the passages just discussed, sound (or voice; *vox*) and odour are given as examples for such obstacles.¹⁴ However, there is no information about how these obstacles are related to the entities they are voices or odours *of*. Two earlier passages provide essential information in this regard:

[DM3] [B]y its own nature sight does not discriminate but [...], confusedly and in a certain undifferentiated totality (*in globo quodam et confuse*), it senses an intervening thing which gets in [sight's] way within the sphere of its operation, i.e., within the eye. This obstacle is produced in the eye from a multiplication of the forms (*species*) of the object.¹⁵

[DM4] Our mind, when it is stimulated by the obstacle of the forms (*species*) which are multiplied from the objects to the spirit, assimilates itself to the objects by means of the forms.¹⁶

¹¹ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.8 n.114sq., ed. R. STEIGER. Generally, establishing order by means of processes like discrimination, definition, etc. is the key feature of the *ratio* according to Cusanus—“*omnis discretio ex ratione est*” (NICOLAUS CUSANUS, *Idiota de mente* c.5 n.83, ed. R. STEIGER). In relation to sense perception in *De mente* cf. Cusanus, *Idiota de mente* c.5 n.82sq.; c.7 n.100; c.8 n.115, ed. R. STEIGER. In some passages like the one discussed here, the *imaginatio* is endowed with a certain—lesser, in contrast with that of the *ratio*—ability to discriminate. One of the questions we are asking in this paper is whether the role of reason in perception is limited to this operation of discrimination or whether it brings something further into human perceptual experience.

¹² There are different ways of spelling out what ‘assimilation’ means from an epistemological point of view. Generally, it can be described as cognising something by becoming (like) this something, where the something can be any object of cognition, be it material or immaterial. More specifically, then, the assimilation can be conceived as taking place either (a) via mental representations of what is cognised, i.e. via intermediaries between cogniser and what is cognised; or (b) by means of the cogniser becoming (like) what is cognised in the act of assimilation without any intermediaries. Both strategy (a) and (b) can then be divided into sub-branches. While it is a question worth investigating where to place Cusanus in this regard, it is not the question we are concerned with here. For our purpose it is sufficient to work with a general notion of assimilation as entailing awareness of an external thing without committing to any of the strategies of spelling it out.

¹³ For Cusanus’ first philosophical work, cf. NICOLAUS CUSANUS, *De docta ignorantia* I c.1 n.3sq.; c.3 n.9sq., ed. K. BORMANN, in *Nicolai de Cusa Opera Omnia, iussu et auctoritate Academiae Litterarum Heidelbergensis ad codicum fidem edita (h²I)*, Hamburg 2008. For his last work cf. NICOLAUS CUSANUS, *De apice theoriae* n.3sq.; 10sq., ed. R. KLIBANSKY et H.G. SENGEL, in *Nicolai de Cusa Opera Omnia, iussu et auctoritate Academiae Litterarum Heidelbergensis ad codicum fidem edita (h²II)*, Hamburg 1982. For *De mente*, cf. NICOLAUS CUSANUS, *Idiota de mente* c.2 n.59sq.; c.3 n.69-72, ed. R. STEIGER.

¹⁴ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.8 n.113, ed. R. STEIGER.

¹⁵ NICOLAUS CUSANUS, *Idiota de mente* c.5 n.82, ed. R. STEIGER: “Nosti enim visum de sua propria natura non discernere, sed in globo quodam et confuse sentire obstaculum, quod sibi obviat intra sphaeram motus sui, scilicet oculum, quod quidem obstaculum generatur ex multiplicatione specierum obiecti in oculum”.

¹⁶ NICOLAUS CUSANUS, *Idiota de mente* c.7 n.100, ed. R. STEIGER: “[E]xcitata per obstaculum specierum ab

Cusanus employs terminology here that is clearly derived from the *species*-doctrine that was popular in the thirteenth century and with few exceptions remained at the core of the dominant model of perception until the modern period. [DM3] and [DM4] make clear: the obstacles perceivers are confronted with are not sensory objects like trees or dragonflies themselves, but the *species* which are emitted from these objects and which arrive at the perceivers' sense organs by means of multiplication through a medium.¹⁷ Cusanus does not elaborate on this emission and multiplication of *species* in *De mente*, which may be explained by the fact that it was common knowledge in his time and thus in no need of particular justification. It can also mean that in *De mente*, Cusanus has nothing substantial to add to the debate over the nature of the *species* and their role in the perceptual process. Instead, he seems to take their existence and epistemic role at face value and choose to remain neutral about any particular interpretation of these representational devices. Therefore, [DM3] and [DM4] make the statements about a confrontation with obstacles significantly less vague than the passages appear to be when read in isolation. They achieve this by situating Cusanus in a well-established tradition on perception that takes perception, especially visual perception, to be dependent on incoming sensory *species*. His readers would certainly be familiar with such a theory, which may explain why he did not feel the need to provide a more detailed presentation.

A second specification can be made: the contact with an obstacle leading to an *excitatio* takes place *within* perceivers.¹⁸ As the general thesis that being confronted with an obstacle leads to an *excitatio* leaves room for holding pretty much any theory of sense perception (either active or passive), this qualification is necessary.¹⁹ Taking sight as an example: if the *locus* of the confrontation were not determined, both intromissionist and extramissionist accounts of visual perception—whereby *species* are issued from the object to eye, according to the intromissionist picture, or visual rays exit the eyes towards the object, according to the extramission model—would be possible. The fact that Cusanus incorporates the doctrine of the *multiplicatio specierum* from sensory objects to perceivers, however, strongly indicates an intromissionist account. [DM3] confirms this, again with sight as the example: the *species* perform their role as obstacles *within* the eye, meaning that they impede the progression of the corporeal spirit by being received *in* the sense organ. The same holds, in their respective sense organs, for sounds and odours: The corporeal *spiritus* is confronted with sounds in the ears (*in auribus*), with an odour when it enters the nose (*cum nares subintrat*).²⁰ In the face of this and given [DM3], the following passage—part of the philosophers description of how sensations come about—might appear surprising:

objectis ad spiritum multiplicatarum se assimilat rebus per species”.

¹⁷ The *locus classicus* of this doctrine is ROGER BACON, *De multiplicatione specierum*, in *Roger Bacon's Philosophy of Nature*, ed. and trans. D.C. LINDBERG, Oxford 1983. For the origins of the doctrine, see D.C. LINDBERG, *Theories of Vision. From Al-Kindi to Kepler*. Chicago 1976. For opposing views on the issue and the problems related to the *species* (and further references), see J.F. SILVA and J. TOIVANEN, “The Active Nature of the Soul in Sense Perception: Robert Kilwardby and Peter John of Olivi”, in *Vivarium* 48:3-4 (2010), 245-278. We do not claim that the connections to the tradition of sense perception we point out in this paper are original findings. Generally, the apparatus of the Cusanus' critical edition provides a good overview of the authors and texts Cusanus could be referring back to. What our analysis of Cusanus' account of perception shows is how he places himself in regard of some of the key position in the matter.

¹⁸ At this point we remain neutral as to whether or not the presence of the *species* is the cause of the *excitatio*. We come back to this later in this section—in which way perceptual experience is active or passive, according to Cusanus, partially depends on this qualification. The *excitatio* is an established *topos* in connection with sense perception. On the excitation-model of perception of Boethian origin, see J.F. SILVA, *Robert Kilwardby on the Human Soul. Plurality of Forms and Censorship in the Thirteenth-Century*. Leiden 2012, 136-37; H.T. ADRIAENSSEN, “Peter John Olivi on Perceptual Representation”, *Vivarium* 49:4 (2011), 324-52.

¹⁹ On this, see J.F. SILVA, “The Chameleonic Mind. The Activity versus the Actuality of Perception” (*forthcoming*).

²⁰ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.8 n.113, ed. R. STEIGER.

[DM5] [T]he very strong, subtle, and acute direction of the rays of the eyes brings it about that the air yields to it and that nothing can resist it except something densely earthen or densely aqueous.²¹

Without introducing them before this passage and without mentioning them again afterwards, Cusanus suddenly seems to bring in notions of an extramissionist account of vision here. Looking at [DM3], the question arises: If objects emit *species* that arrive in the eye and lead to an *excitatio* there, why and how would one want to fit visual rays into the picture? There is no need to establish contact with sensory objects outside the boundary of the eyes when perceivers are confronted with *species* in the eyes, so there is no need to reach out to anything by means of visual rays.

In fact, [DM5] is helpful in informing us of what version of the *species*-doctrine could be serving as a background for Cusanus. For we find the same dual account—incoming *species* and outgoing visual rays—in Roger Bacon. According to Bacon, in his treatise *Perspectiva*, the eyes receive *species* issued from every point on the surface of an object in a complicated process of diffusion. However, a fiery spirit has to be issued through the eyes of a perceiver to prepare the medium (air or water) surrounding the surface of the eyes for taking on the visual *species*.²² Once the medium is thus disposed, the *species* can be received in the already disposed eye lens of the perceiver. Whether there is a need for these rays, in addition to the incoming *species*, was controversial, as the traditional account of the *species* is built on an intromission assumption and in opposition to the extramission model. Alhacen, one of the most important proponents of the so-called perspectivist optics on whom Bacon himself relies, devotes a lengthy section of his work *De aspectibus* to criticize the extramission model.²³ It is not our aim to examine the reasons why Bacon includes the extramission of visual rays in his account of visual perception; important is that this inclusion could be taken to provide an explanation of why Cusanus does not seem to have any problem with incorporating visual rays himself. He could simply be taking Bacon for granted as a background. What Cusanus describes can, as the sudden appearance of visual rays exemplifies, seem vague and conceptually strange at times. Nevertheless, it can be shown to share a great deal with the discussions on perception he is looking back on.

Third, Cusanus' account of perception in *De mente* raises questions regarding what is perceived. If the *species* received in the sensory organs are what impedes the corporeal *spiritus* and what the soul engaging with through the *spiritus*, what exactly is the object of perception—the *species* functioning as obstacles or the sensory objects emitting the *species*? The answer to this question determines whether Cusanus adheres to a more representationalist or a more (indirect) realist notion of perception. This answer cannot be given unambiguously, though, as the passages discussed so far show. [DM1], [DM2], and [DM3] seem to suggest that it is the obstacle that is sensed, which would make the *species* the (primary) object of perception. [DM4], in contrast, clearly describes the *species* as a *medium quo*; it is *through* the *species* that assimilation to objects takes place. The situation is further complicated by the fact that Cusanus often, and consciously, avoids terminological precision.²⁴ Context plays a crucial role in understanding what he means when employing a given term, but the context of

²¹ NICOLAUS CUSANUS, *Idiota de mente* c.8 n.113, ed. R. STEIGER: “Facit etiam oculorum adeo fortis radiorum directio subtilis et acuta, ut aër ei cedat nec aliquid ei obsistere possit, nisi grossum sit terreum vel aqueum”.

²² ROGER BACON, *Perspectiva* I d.7, c.2-4, ed. D.C. LINDBERG.

²³ ALHACEN, *De aspectibus* I.6.55-56, in *Alhacen's Theory of Visual Perception*, ed. and transl. A.M. SMITH, Philadelphia 2001.

²⁴ NICOLAUS CUSANUS, *Idiota de mente* c.8 n.111, ed. R. STEIGER: “Ego, qui sum idiota, non multum ad verba attendo”. This stance is due to the conviction that language cannot reach precision when trying to capture anything that is not brought into existence solely by humans. Cf. NICOLAUS CUSANUS, *Idiota de mente* c.2 n.58—c.3 n.70, ed. R. STEIGER for the key sections in this regard.

the passages in question here does not yield much information regarding the (primary) object of perception. It is plausible to assume that Cusanus considers the *species* as *media quo*—similar to how he seems to take visual rays for granted, he could take Thomas’ description of the *species* as an *id quo*²⁵ for granted. Cusanus shows no awareness concerning the question of what the primary object of perception is that would indicate a different take on *species*. What he writes does not rule out either of the interpretive options.

The fact that Cusanus appeals to a two-stage framework of perception that consists of *excitatio* and discrimination raises, fourth, a key question regarding the sequence of the processes involved: can there be an *excitatio* that does not already entail the mind being in a perceptive state? In other words, can perceptual capacities be said to engage with an obstacle of the corporeal spirit *after* an *excitatio*, without the obstacle being perceived right away when it is encountered (i.e. when the mind is made to notice such an obstacle to the motion of the spirit it directs)? To have a clear view of how Cusanus conceives of perception, it is essential to clarify how the *excitatio* is to be understood—if the *excitatio* already entails perception, then the senses’ indeterminate perception appears to be part of the first stage, whereas the ordering of indeterminate content marks the second stage. If, on the other hand, the *excitatio* entails no perception, then both the senses’ indeterminate perception and the discriminating activity of the *imaginatio* or *ratio* have to take place in the second stage. The passages discussed so far are not clear in this regard. [DM3] and [DM4] are neutral. [DM1] can be read as suggesting that the *excitatio* is a non-cognitive process, as the soul only takes note (and, with that, action) in reaction to being impeded by an obstacle. [D2], on the other hand, does not seem to suggest a succession of a non-perceptual *excitatio* and perceptual activity.

The following passage provides a clear indication of how to approach this question:

[DM6] in our body, the mind makes various fine and coarse (*subtiles et grossas*) configurations in accordance with the varying pliability of the arterial spirits present in the organs, and one spirit is not configurable to that to which another is. Because the spirit in the optic nerve cannot be affected by forms of sound but only by forms of colours, it is configurable to the forms of colours but not of sounds. And the same holds for the others [sc. spirits]. And there is another spirit that is configurable—though in a coarse and indiscriminate (*grosso et indiscrete*) manner—to all perceptual forms; it is imaginative organ. And there is another in the rational organ, which is configurable discretely and clearly to all perceptible things.²⁶

The passage is part of the description Cusanus provides of the forms of assimilation human *mentes* can perform. This description is central to *De mente*, and its underlying thesis is that the *mens* assimilates itself ([DM4]) to its objects of cognition,²⁷ therefore characterising cognition as an active process. Important regarding the *excitatio* in [DM6] is that indistinct sensing (the coarse assimilation of the arterial spirits and the coarse assimilation of the *imaginatio*) is already described as an assimilative activity of the *mens*.²⁸ Cusanus thus puts indeterminate sensing and rational discrimination on the same side of the epistemic equation. If rational discrimination only becomes active due to an *excitatio*, the same must hold for

²⁵ Cf. THOMAS DE AQUINO, *Summa Theologiae* I q.85 a.2, in *Sancti Thomae de Aquino Opera Omnia iussu Leonis XIII edita, Ia q. 50-119 cum commentariis Caietani*, Rome 1889.

²⁶ NICOLAUS CUSANUS, *Idiota de mente* c.7 n.101sq., ed. R. STEIGER: “in nostro corpore mens facit secundum variam flexibilitatem spirituum arteriarum in organis varias configurationes subtiles et grossas, et unus spiritus non est configurabilis ad id, ad quod alius. Quia spiritus in nervo optico non est offendibilis per species sonorum, sed solum colorum, ideo configurabilis est speciebus colorum et non sonorum. Et ita de aliis. Et est alius spiritus ad omnes sensibiles species configurabilis, qui est in organo imaginativae, sed grosso et indiscrete modo. Et alius in organo ratiocinativae est ad omnia sensibilia discrete et lucide configurabilis”.

²⁷ For the full section on the forms of assimilation cf. Cusanus, *Idiota de mente* c.7 n.99-106, ed. R. STEIGER.

²⁸ The terminology of ‘coarse’ and ‘discriminate’ assimilation is closely related to that of the ‘confused’ and indiscriminate sensing Cusanus describes in [DM2] and [DM3].

indiscriminate sensing. An *excitatio* therefore seems to precede perception. Both sensing and rationalising take place only when an *excitatio* makes the *mens* take note of the obstacle causing it. This allows us to stop being neutral regarding to the causal impact of the *species*.²⁹ As both the sensory and rational powers of the *mens* become active only after an *excitatio*, the presence of the *species* in the sensory organs of a perceiver have to cause the *excitatio*.

This does not mean that an *excitatio* is “empty” in the sense that the *species* causing it carry no information—such a claim would invalidate the whole notion of *species* as representatives of the objects emitting them. Rather, it means that the information *species* carry does not automatically cause perceptual content the moment it is received in a sensory organ. To access this information and generate perceptual content, the *mens* has to *do* something, both sensorily and rationally, but it only does it when incoming *species* hitting the appropriate sensory organs cause an *excitatio*. In our current terminology, we could put it like this: *species* carry encoded information. If a *species* arrives in an appropriate sensory organ, a connection is established between itself and the corporeal spirit in this sensory organ. But this reception is not on its own conducive of cognition, i.e. the information is not automatically decoded. Rather, in a first step, the reception of the information triggers the sending of a signal that catches the attention of the *mens* animating the corporeal spirit. The *mens* then, in a second step, employs the sensory and rational instruments necessary to decode the information, generating an episode of perception with content that is properly structured.

The relation between *excitatio* and perception being thus accounted for, a fifth and final aspect remains to be fleshed out. The fact that Cusanus speaks of different mental powers employed in sense perception—indiscriminate sensing and rational distinction or discrimination (*discretio*)³⁰—raises the question of how they interact. After having established that both the senses and the *ratio* operate after an *excitatio*, now the relation between the senses and the *ratio* when becoming active due to an *excitatio* has to be clarified.

Up until now, our emphasis has been on the description of the receiving-triggering process, paying little attention to the capacities at play in that process. It is therefore necessary at this point to provide some clarification on how Cusanus characterises ‘mind’ (*mens*) and ‘power’ (*vis*) in *De mente*. ‘*Mens*’ according to *De mente*, comes in two varieties: infinite or as an image of the infinite. The former is the divine *mens*, god. Images of the divine *mens* can, as they are themselves not infinite, animate bodies. If they do so, they are called ‘soul’. Thus, according to this model from the first chapter of *De mente*, minds are more basic than souls in the sense that they can be (in the strong sense) in and of themselves (*in se subsistens*), while

²⁹ Cf. footnote 18 above.

³⁰ A possible influence for this conception is Hugh of St. Victor. On his use of the notion of ‘*discretio*’ in a similar way cf. J.P. KLEINZ, *The Theory of Knowledge of Hugh of St. Victor*, Ann Arbor, Michigan 1987, 55. In Avicenna’s *De anima*, the traditional place for the classification of the internal senses, the function of discrimination belongs to the common sense (see AVICENNA, *Liber de anima seu sextus de naturalibus* I.5; II.2; III.8; IV.1-5, ed. S. VAN RIET, Louvain-Leiden 1972). On this, see C. DI MARTINO, *Ratio Particularis. Doctrine des sens internes d’Avicenne à Thomas d’Aquin*, Paris 2008. In Alhacen, and then in the tradition of perspectivist optics, discrimination is assigned to a *virtus distinctiva* (ALHACEN, *De aspectibus* II.3.17, ed. A.M. SMITH). There is a dispute within this tradition regarding the rational or sensory nature of discrimination, as well as whether discrimination constitutes—ontologically speaking—a cognitive faculty on its own or is rather a function of a cognitive faculty. Without going into the details of the debate it suffices to say that Nicholas sides with authors such as Alhacen, John Pecham, and perhaps more importantly, Blasius of Parma, in contrast with e.g. Roger Bacon. On this, see J. HACKETT, “Animal and Human Knowledge in the *Perspectiva*: (*Opus Maius*, part five) of Roger Bacon”, in *Philosophical Psychology in Arabic Thought and the Latin Aristotelianism of the 13th Century*, ed. L.X. LÓPEZ-FARJEAT and J.A. TELLKAMP, Paris 2013, 223-241; A.I. SABRA, “Sensation and Inference in Alhacen’s Theory of Visual Perception”, in *Studies in Perception. Interrelations in the History of Philosophy and Science*, ed. P.K. MACHAMER and R.G. TURNBULL, Columbus, Ohio 1978, 160-185; J.F. SILVA, “Perceptual Judgment in Late Medieval Perspectivist Psychology”, *Filosoficky Casopis*, in *Special Issue on Perception in Scholastics and Their Interlocutors* 2 (2017), 29-60; A.M. SMITH, *From Sight to Light. The Passage from Ancient to Modern Optics*, Chicago 2015.

they are souls only when animating a body (*in corpore subsistens*).³¹ Human souls are therefore embodied *mentes*.³² As such, they perform, as one living substance encompassing them all, a variety of (hierarchically ordered) functions: vegetative, sensitive, rational, intellectual, intellectible.³³ But if it is one and the same *mens* as an ontological unity that is performing all these functions, it has to be able to perform different functions—and especially functions of a different kind, say sensory and intellective—at the same time. If we could not breathe and think at the same time, for example, life as a philosopher would be much more dangerous than generally given credit for. While Cusanus does not explicitly make this important point himself, he makes another, quite similar, one: the different functions a humans *mind* can perform are not strictly separated from each other. The *mens* can (intellectually) “inform and illuminate and perfect” its rational activities, and the same holds for the rational activities with regard to the senses.³⁴ Interpreting this as different functions being performed separately and related to each other only after their respective tasks are finished is possible, but the way Cusanus phrases the interaction between the different functions strongly suggests that they are not independent of each other in the sense just described. While, given the way Cusanus describes them as different, it is implausible to assume that he is making a strong claim of identity according to which the different functions are in fact identical,³⁵ the functions appear to be either concurrent with or permeating each other. This is particularly the case with the role reason plays in the perceptual process.

Similar suggestions have been made in the literature but we find the existing accounts lacking in explanatory power: scholars, such as Spruit and Leijenhorst, have approached this issue from the point of view of perceptual judgement, but both have said little about what the content of the judgement is, as well as the nature of the powers performing it.³⁶ Miller, on the other hand, has paired this rational aspect with a passive account of perception.³⁷ We aim at complementing their suggestions, by claiming that Cusanus does not understand sense perception as a process in which indistinct sensing and (rational) discrimination are two operations taking place separately from each other, with the senses first providing some sort of content upon which order or structure is *at a later stage of processing* imposed by reason. To the contrary, Cusanus seems to think of the sensory engagement with *species* and the

³¹ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.1 n.57, ed. R. STEIGER.

³² Cf. NICOLAUS CUSANUS, *Idiota de mente* c.5 n.81, ed. R. STEIGER: “Visne mentem [...] ante corpus fuisse [...]? Natura, non tempore. Nam, ut audisti, eam visui in tenebris comparavi. Visus autem nequaquam actu fuit ante oculum nisi natura tantum”.

³³ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.5 n.80, ed. R. STEIGER. In *De mente*, Cusanus uses ‘intellectible’ (*intellectibilis*) to describe the epistemic mode in which humans try to assimilate themselves to god. As such, it is hierarchically located above intellectual cognition which deals with pure forms. Cf. NICOLAUS CUSANUS, *Idiota de mente* c.7 n.103-106, ed. R. STEIGER in conjunction with the list of epistemic activities in the passage quoted at the beginning of the footnote.

³⁴ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.5 n.84, ed. R. STEIGER: “mens informat, dilucidat et perficit ratiocinationem, ut sciat quid syllogizet”. The example Cusanus uses to present this assumption is reading. Without the *ratio* informing the senses, one would not even know *what* is being seen; without the intellect informing the *ratio*, one would only be seeing and ordering letters without knowing what the words formed by these letters mean.

³⁵ Blasius of Parma (c. 1365-1416) makes such a strong claim; cf. BLASIUS DE PELACANIS DE PARMA, *Quaestiones de anima* I q.8, in *Le Quaestiones de anima di Biagio Pelacani da Parma*, ed. G. FEDERICI VESCOVINI and J. BIARD, Florence 1974, 84: “Unde non est dubium quod anima intellectiva est anima visiva et auditiva et nutritiva et sic de aliis”. Blasius, whose work Nicholas may have been acquainted with during his stay in Padua, defends a materialist conception of the human soul in which no substantial distinctions are found within it: the soul that perceives is the soul that understands. On this cf. J.F. SILVA, “Perceptual Judgment in Late Medieval Perspectivist Psychology”. Cf. also O. RIGNANI, “Biagio Pelacani e il senso agente”, in *Corpo e anima, sensi interni e intelletto dai secoli XIII-XIV ai Post-Cartesiani e Spinoziani*, ed. G. FEDERICI VESCOVINI et al. Turnhout 2005, 247-66.

³⁶ Cf. C. LEIJENHORST, “Active Perception from Nicholas of Cusa to Thomas Hobbes”, 176; L. SPRUIT, *Species intelligibilis*, 20-28.

³⁷ C.L. MILLER, “Cusanus, Nicolaus [Nicolas of Cusa]”.

rational discrimination of the information thus provided as intricately connected aspects of *one* process. As he puts it in [DM2]: *when*—i.e. at the same time and not after—seeing something, the same mind that by using the senses does the seeing rationally discriminates that content because the differentiating or discriminating power is *conjoined* with the sensory power. [DM3], in a similar fashion, continues as follows:

[DM6] Hence, if in an eye vision is present without discrimination [...], then mind comes to the sensible soul just as discrimination comes to (*advenit*) sight, by which it discerns between colours³⁸.

It must be said that the way Cusanus phrases these passages does not categorically rule out a reading that conceives the different aspects of sense perception as separate processes of, first, sensing and, afterwards, discerning. However, such a reading has a significant amount of interpretive work to do. To even discern colours, according to Cusanus, a differentiating power has to “come to” sight. He nowhere states that *after* an act of indiscriminate “sensing” what is sensed is differentiated. Given the way he distributes the two tasks carried out in sense perception, the only route of a “separatist” reading to account for the fact that we plainly sense “somethings” and not just indistinct lumps yet to be ordered would be: to say that the indistinct sensing happens so quickly that we do not even notice it and that what we experience as perception is actually the discerning process that follows. Along the reading we are proposing, on the contrary, one can simply say: as the *mens* rationally concurs with or permeates acts of sensing, distinction of what is perceived takes place right *when* it is perceived. A major consequence of this reading is that, insofar as the act of the reason in perception is discrimination (i.e. judgement) and in general terms conceiving understood as bringing conceptual unification to reign on the multiplicity of sensory information, *human perception is inherently rational*.

To conclude the section on *De mente*, we briefly summarise our results: in *De mente*, Cusanus presents a two-stage model of rational perception. *Species in medio*, emitted by sensory objects, cause an *excitatio* when they arrive in appropriate sensory organs. This first stage leads to the second stage, that of perception proper. Made to take notice of the obstacle incoming *species* present, a human *mens* employs her sensory and rational powers to engage with and make sense of the obstacle encountered. The senses provide indeterminate content, and the *ratio* provides discrimination. Contributing to a joint activity through these powers perceptual content is generated based on the information incoming *species* carry. Perception is awareness of whatever is made accessible in that perceptual content, which is sensory information rationally structured. However, while the general notion of sense perception Cusanus presents seems clear, caution is required because some questions remain concerning some of the specifics—i.e. the primary object of perception, the exact way the different powers work together, and the discrimination contributed by the *ratio*.

(b) *De coniecturis*

With these preliminary results and open questions in mind, it makes sense to take a look back at *De coniecturis*, written in 1441/1442. This will help clarifying some of the issues discussed so far as well as the suggested solutions. In *De coniecturis*, Cusanus describes human cognition as a conjectural activity that participates in truth to various extents, but can never fully reach it.³⁹ This activity takes place in a hierarchically ordered ontological world resting

³⁸ NICOLAUS CUSANUS, *Idiota de mente* c.5 n.82, ed. R. STEIGER: “Unde si adest visio in oculo sine discretione [...], tunc ita advenit mens animae sensibili sicut discretio visui, per quam discernit inter colores”.

³⁹ NICOLAUS CUSANUS, *De coniecturis* I c.11 n.55, ed. J. KOCH, K. BORMANN et H.G. SENER, in *Nicolai de*

on god as its absolute origin, and it is performed on different, hierarchically ordered epistemic levels.⁴⁰ While the terminology is different from that in *De mente* and some of the features Cusanus describes in *De coniecturis* are exclusive to the treatise, the epistemological and ontological core assumptions are mostly the same.

The same can be said, more specifically, for the passages on sense perception. While Cusanus offers little on the physiognomy of perception—*spiritus* (without explicit reference to corporeality) is mentioned,⁴¹ an “opposing” (*obviatio*, terminologically close to the ‘*obstare*’ from *De mente*) is stated to be the origin of perception,⁴² and there is a statement about the sleeping *ratio* being woken up by admiration stemming from perception.⁴³ There is, however, a remarkable passage on the epistemic capacities involved in perception and the functions they perform:

[DC1] The senses of the soul perceive that which is perceptible and there would not be anything perceptible without the unity of the senses. But this perception is confused and coarse (*confusa atque grossa*), removed from all discrimination. For the senses perceive but does not discriminate. *For every discrimination is from reason*, for reason is the unity of perceptible number. Therefore, if by means of the senses white is distinguished from black, heat from cold, the sharp from the dull, and *this* perceptible object from *that* perceptible object: *this [distinguishing] descends from the property of reason*. Therefore, the senses as such do not negate; for negating is a feature of discriminating. The senses only affirm the existence of the perceptible but do not affirm that the perceptible is this or that. Therefore, reason uses the senses as an instrument for discriminating between perceptible objects; but *it is reason itself which discriminates a perceptible object in the senses*.⁴⁴ (emphasis added)

Postponing the explanation of the “unity of the senses” and the reason’s descent for a moment, the parallels between [DC1] and *De mente* are striking. The senses, in isolation, could only provide (indeterminate) content in the form of affirming that something perceptible is there to be perceived.⁴⁵ Any discrimination that is taking place in perception is only taking place because the soul, more precisely, the rational power of the soul, uses the senses as an instrument. Without rational activity, the senses could not even distinguish *this* object from *that* object.

Given these parallels, looking at the aspects from [DC1] not discussed in *De mente* promises additional insight. This leads us back to what is in need of explanation: the “unity of the senses” and the descent of reason into the senses. First, the ontological and epistemological framework Cusanus develops in *De coniecturis* is one of unities: ontologically, god is the absolute unity. In hierarchical order, then, the intelligences, the souls

Cusa Opera Omnia, iussu et auctoritate Academiae Litterarum Heidelbergensis ad codicum fidem edita (h III), Hamburg 1972 contains one of the clearest and most explicit descriptions of the notion of asymptotic assimilation in Cusanus’ works.

⁴⁰ The first book of *De coniecturis* (NICOLAUS CUSANUS, *De coniecturis* prol.-c.13 n.1-69, ed. J. KOCH, K. BORMANN et H.G. SENER) provides a compact description of the treatise’s aims and core aspects.

⁴¹ Cf. NICOLAUS CUSANUS, *De coniecturis* II c.10 n.121, ed. J. KOCH, K. BORMANN et H.G. SENER.

⁴² Cf. NICOLAUS CUSANUS, *De coniecturis* II c.14 n.141, ed. J. KOCH, K. BORMANN et H.G. SENER.

⁴³ Cf. NICOLAUS CUSANUS, *De coniecturis* II c.16 n.159, ed. J. KOCH, K. BORMANN et H.G. SENER. Compare the passage in *De mente* referred to in footnote 8.

⁴⁴ NICOLAUS CUSANUS, *De coniecturis* I c.8 n.32, ed. J. KOCH, K. BORMANN et H.G. SENER: “Sensus animae sentit sensibile, et non est sensibile unitate sensus non existente; sed haec sensatio est confusa atque grossa, ab omni semota discretione. Sensus enim sentit et non discernit. Omnis enim discretio a ratione est; nam ratio est unitas numeri sensibilis. Si igitur per sensum discernitur album a nigro, calidum a frigido, acutum ab obtuso, hoc sensibile ab illo, ex rationali hoc proprietate descendit. Quapropter sensus ut sic non negat, negare enim discretionis est; tantum enim affirmat sensibile esse, sed non hoc aut illud. Ratio ergo sensu ut instrumento ad discernendum sensibilia utitur; sed ipsa est, quae in sensu sensibilibus discernit”.

⁴⁵ This includes terminology: ‘*grossa*’ and ‘*confusa*’ are the same expressions we find in *De mente*.

and the bodies follow as lesser unities.⁴⁶ Their lesser degree of unity is complemented by an increasing degree of alterity regarding the higher unities and god, making it so that on every ontological level, every entity is a specific composition of unity and alterity.⁴⁷ This scheme is mirrored epistemologically. The epistemic capacities a human *mens* has—intellect, reason, and the senses, most notably—are considered as unities exhibiting the same pattern.⁴⁸ Second, the unities Cusanus describes in *De coniecturis* are not just unities in themselves. They are connected by the fact that lower unities originate from their respective higher unities, diversifying into alterity what is unified one level higher and participating in the unity they emerge from in alterity. The intellect, to give an example, is therefore the unity *of* the soul.⁴⁹ Third, Cusanus characterises the relation between the different levels of unities as a complementary and simultaneous process of descending and ascending.⁵⁰

Cusanus describes the process of descent and ascent with regard to humans as well, and this brings us back to sense perception (in which “the soul is the unity of perceptible objects”⁵¹):

[DC2] Now, this intellect descends in our soul unto the senses so that the perceptible ascends unto the intellect; and the perceptible ascends unto the intellect so that the intellect descends unto it. For the intellect’s descending unto the perceptual is the perceptible’s ascending unto the intellect. *For the visible is not attained by the sense of sight in the absence of the intellectual power’s endeavor.* Indeed, we experience this when, being intent on other matters, we do not discern a passerby. For the senses take in, confusedly, the perceptible as it ascends unto them; but that *perception is unformed and indistinct unless, in us, intellect descends through the medium of reason.*⁵² (emphasis added)

This alludes (1) to an interesting point not present in *De mente*. The statement is not entirely clear, but when talking about not discerning a passerby Cusanus seems to imply that it is possible to simply not *notice* that passerby or, more generally, sensory objects. As Cusanus does not elaborate on the statement, caution is reasonable regarding the conclusions that can be drawn from it. But if it is possible to not notice, i.e. perceive, a sensory object, this would mean that humans can—given they are “intent on other matters” without closing their eyes or using earplugs—receive *species* without an *excitatio* being caused and perception ensuing.⁵³

⁴⁶ Cf. NICOLAUS CUSANUS, *De coniecturis* I c.12sq. n.61-69, ed. J. KOCH, K. BORMANN et H.G. SENER. The model is more complex than described here, as each unity is further divided in sub-unities. For our purpose, however, the rough sketch suffices.

⁴⁷ Cf. NICOLAUS CUSANUS, *De coniecturis* I c.9 n.43, ed. J. KOCH, K. BORMANN et H.G. SENER for the introduction of the thought.

⁴⁸ Cf. for example the chapter on humans in NICOLAUS CUSANUS, *De coniecturis* II c.14 n.140-145, ed. J. KOCH, K. BORMANN et H.G. SENER.

⁴⁹ Cf. NICOLAUS CUSANUS, *De coniecturis* I c.9 n.39sq. , ed. J. KOCH, K. BORMANN et H.G. SENER for the assumption and an example of it.

⁵⁰ Cf. NICOLAUS CUSANUS, *De coniecturis* I c.4 n.16, ed. J. KOCH, K. BORMANN et H.G. SENER for the introduction of this process. Ibid. II c. 7 n. 107 emphasises the simultaneity of descent and ascent.

⁵¹ NICOLAUS CUSANUS, *De coniecturis* I c.7 n.28, ed. J. KOCH, K. BORMANN et H.G. SENER: “Nam cum [anima] sit unitas sensibilium, omne diversum sensibiliter in ipsa est unum”.

⁵² NICOLAUS CUSANUS, *De coniecturis* II c.16 n.157, ed. J. KOCH, K. BORMANN et H.G. SENER: “Intellectus autem iste in nostra anima eapropter in sensum descendit, ut sensibile ascendat ad ipsum. Ascendit ad intellectum sensibile, ut intelligentia ad ipsum descendat. Hoc est enim intellectum descendere ad sensibile, quod sensibile ascendere ad intellectum. Visibile enim non attingitur per sensum visus absente intensione intellectualis vigoris. Hoc quidem experimur, dum circa alia intenti praetereuntes non discernimus. Sensus enim confuse capit sensibile in ipsum ascendens, sed non est sensatio formata atque discreta absque intellectu in nobis per medium ratione descendente”.

⁵³ We find a similar example in Augustine’s *De trinitate* (AUGUSTINUS, *De Trinitate* XI.8.15, ed. W.J. MOUNTAIN auxiliante F. GLORIE (CCSL 50), in *Aurelii Augustini Opera. Pars XVI,1*, Turnhout 1968, 351-52). For an interpretation of this passage, see J.F. SILVA, “Augustine on Active Perception”, in *Active Perception in*

[DC2] is (2) relevant regarding the interaction of the *mens*' sensory and rational powers discussed already in the context of *De mente*.⁵⁴ The *ratio*, the senses(, and the intellect) are presented as different unities in [DC2], which again raises the question how strong of a unity Cusanus is envisioning the *mens* to be. If the descending of the intellect and the ascending of the senses is one complementary process, does that mean that the senses and the intellect are in fact the same? There is a passage in *De coniecturis* that at first sight seems to point in this direction.⁵⁵ But a closer look reveals that such an interpretation does not withstand scrutiny. Cusanus does hold that the *mens*—or whichever other term is used to describe the encompassing unity of certain powers or functions—is a unity that is wholly in its powers or functions.⁵⁶ Therefore, the *mens* can be said to be intellect, for example, as in turn the intellect—*pars pro toto*—can be called '*mens*'. Nonetheless, the powers of the *mens* remain distinct from each other. Coming back to our starting point of descent and ascent: the notion of a hierarchy of epistemic powers or functions would be meaningless if they were considered identical. There would simply be nothing to descend or ascend *to*. [DC2] is one of the passages making clear that the powers of the *mens* are not employed independently of each other or in temporal succession. They are not a unity in the sense that they are identical with each other. Yet they are intricately connected and work together to generate acts of sense perception, each power making its specific contribution. The *ratio*—or, adding a layer of complexity, the intellect through the *ratio*—descends unto the senses and orders indeterminate content into separate objects, qualities, etc.

How Cusanus (3) describes the joint work yielding sense perception in [DC2] and *De coniecturis* in general provides insight into what it means for the *ratio* to bring order and distinction into perception. It may appear like the senses are contributing something unified (an indeterminate mass) to perception which is then split and ordered into a multitude of different things by the *ratio*. Yet the opposite is the case for Cusanus. The discrimination contributed to perception by the *ratio* is actually a unification: by ordering indeterminate sensory content the *ratio*, as it is more unified than the senses, unifies the content they provide. A scattered multitude of sensory aspects—colours, smells, tastes, and so on—“ascends” to the unity of, say, a particular apple tree by means of the *ratio* “descending” unto the senses.⁵⁷ Rational discrimination in sense perception means finding unity in the alterity of indiscriminate sensory content, as the following passage makes clear:

[DC3] Reason is the unity of perceptible nature [...]. Through the unity of reason a perceptible multitude of individuals is determined specifically [...]. Therefore, the unity of reason enfolds within itself the multitude of all perceptible things.⁵⁸

the History of Philosophy, ed. J.F. SILVA and Mikko YRJÖNSUURI, Dordrecht 2014, 79-98.

⁵⁴ Cf. p. 8-10 above.

⁵⁵ Cf. NICOLAUS CUSANUS, *De coniecturis* II c.16 n.157sq., ed. J. KOCH, K. BORMANN et H.G. SENER. Cf. also NICOLAUS CUSANUS, *Idiota de mente* c.11 n.141, ed. R. STEIGER, where the same point is made.

⁵⁶ With this thesis he inscribes himself into the Augustinian tradition on the matter. Compare the passages quoted in the previous footnote with passages from pseudo-Augustine's influential treatise on the spirit and soul, for example: PSEUDO-AUGUSTINUS, *De spiritu et anima*, ed. J.P. MIGNE (PL 779-832), 788-89, 794.

⁵⁷ Similarly, this particular apple tree would “ascend” to the intellectual unity of what it is to be an apple tree by means of the intellect descending unto the rational multitude of apple trees.

⁵⁸ Cf. NICOLAUS CUSANUS, *De coniecturis* II c.12 n.133, ed. J. KOCH, K. BORMANN et H.G. SENER: “*Unitas naturae [...] sensibilis ratio est, per rationis unitatem specificatur sensibilis individuorum multitudo [...]. Unitas igitur rationis in se complicat sensibilibus omnium naturalium et artificialium multitudinem [...]*”. “Enfolding” (*complicare*) and “unfolding” (*explicare*) is terminology commonly used by Cusanus to express the relation described here in terms of unity and alterity. Extensively on the notion of *complicatio* and *explicatio* cf. A. MORITZ, *Explizite Komplikationen. Der radikale Holismus des Nikolaus von Kues* (Buchreihe der Cusanus-Gesellschaft 14), Münster 2006. For short summaries cf. K. REINHARDT, “Complicatio - explicatio”, in *Manuductiones. Festschrift zu Ehren von Jorge M. Marchetta und Claudia D'Amico*, ed. C. RUSCONI, Münster 2014, 81-91; T. LEINKAUF, *Nicolaus Cusanus* (Buchreihe der Cusanus-Gesellschaft 15), Münster 2006, 102-110.

According to Cusanus, this structuring by reason is what makes the sensory information intelligible. One could object that, hidden under the terminology of unity and alterity, of descent and ascent, Cusanus is simply giving a traditional account of abstraction. Imposing order by unifying alterity would, then, simply mean that reason finds patterns or, to be more precise, commonness in the likenesses of objects it receives through the senses. Statements like “The intellect’s descending unto perceptual images is the perceptual images’ ascending from the conditions of their contractedness onto less contracted simplicities”⁵⁹ could be read in this sense. Arguing for an objection along these lines, however, is only possible when ignoring the complementary and simultaneous nature attributed to the processes of *descensus* and *ascensus* by Cusanus. This would not do justice to *De coniecturis*. Nothing speaks against incorporating notions of abstraction in the *ascensus* Cusanus describes; starting from spatio-temporal entities, epistemic ascent can be put in terms of investigating these objects from an increasingly abstract point of view. Yet Cusanus certainly does not give a “traditional”, strictly Aristotelian account of abstraction.⁶⁰ He is not simply describing the process of *grouping* similar properties under concepts but also *applying* concepts to the things perceived. This model fits better into his description of descent and ascent as a “two-directional progression”. As such, his is a major contribution to medieval theories of perception.

De coniecturis, to summarise, both confirms the conclusion we arrived at regarding *De mente* and provides insight into what Cusanus means when he is talking about rational discrimination in perception. There are notable differences between *De mente* and *De coniecturis*, but the statements on sense perception in both works are compatible. *De coniecturis* is far less clear about the physiognomy of perception, but it provides information about how perception is rational that both confirms and enriches what can be found in *De mente* in this regard.⁶¹ What we want to know, as cognitive beings, is the extent to which unity can be found in things. Discrimination is aimed at identifying to which degree what is perceptible “partakes, with a degree of alterity, of the unity”⁶². But this discrimination and the evaluation of unity and alterity cannot be carried out by the senses alone. *It can only be carried out by the senses together with with reason*. Only by means of this joint action can we perceive what there is from an inherently perspectival, conjectural way: one perceives a face not as it is in itself, but according to the angles of one’s eyes. By means of reason operating jointly with the senses, we cannot fail to be aware of this perspectival way and the lack of precision it results in. “The senses experience their own alterity”⁶³, in Cusanus’ words. All

⁵⁹ NICOLAUS CUSANUS, *De coniecturis* II c.16 n.161, ed. J. KOCH, K. BORMANN et H.G. SENGEL: “Nam intellectum in species sensibiles descendere est ascendere eas de conditionibus contrahentibus ad absolutiores simplicitates”.

⁶⁰ He does this neither in *De coniecturis* nor in any of his other works. Passages indicating an Aristotelian model of continuous abstraction from the senses to the intellect appear throughout his works, but they are not made compatible with the autonomy of the intellect Cusanus postulates at the same time. Cf. C. KNY, *Kreative, asymptotische Assimilation* (BGPhThMA. N.F.), Münster (*forthcoming*), 286-299 for a detailed analysis of the issue.

⁶¹ The extensive usage of *complicatio* and *explicatio* (cf. for example NICOLAUS CUSANUS, *Idiota de mente* c.3 n.70-72; c.9 n.116-125, ed. R. STEIGER) as well as a statement like the “mind draw[ing] unto itself that which it frees from variability” (NICOLAUS CUSANUS, *Idiota de mente* c.15 n.156, ed. R. STEIGER: “Ad se enim attrahit, quod a variabilitate abstrahit”) show that the notion of (rationality in perception as a) unification is still present in *De mente*.

⁶² Cusanus uses a sensible and rational circle as the example to illustrate this in NICOLAUS CUSANUS, *De coniecturis* I c.11 n.54, ed. J. KOCH, K. BORMANN et H.G. SENGEL: “Sensibilis igitur circulus in alteritate unitate rationalis circuli participat”.

⁶³ NICOLAUS CUSANUS, *De coniecturis* I c.11 n.57, ed. J. KOCH, K. BORMANN et H.G. SENGEL: “sensus in unitate rationis suam alteritatem experitur”. The ratio and the intellect experience the same, as the full sentence shows: “Quemadmodum vero sensus in unitate rationis suam alteritatem experitur et assertiones sensibiles ab unitate praecisionis absolvendo coniecturis facit, ita ratio in radicali unitate sua, in ipso scilicet intelligentiae lumine, suam alteritatem et casum a praecisione in coniecturam invenit, sic et intelligentia ipsa, ut propinqua potentia, in unitate divina se suo clarissimo modo gaudet coniectari”.

human knowledge is a conjecture, but an informed conjecture. When it comes to perception, this is made possible by reason flowing unto the senses in operation, structuring the sensory content received.

(c) *Compendium*

After this brief look back at *De coniecturis* from *De mente*, we now move on to the *Compendium*. Written in 1464, shortly before Nicholas' death, it spells out human cognition in terms of *species*—with connections to, but not as a manifestation of *species*-theories of cognition as, e.g., Aquinas holds one. Core aspects of sense perception are treated in the *Compendium* the way they are treated in the works discussed so far—sensory objects emit *species* through a medium, perceivers are affected by these *species* and perceive by means of their souls engaging with what is thus encountered. Yet there are also some additions and differences, many of them part of an interesting passage on the sensitive soul at the end of the *Compendium*. To avoid redundancy, we focus on these additions and differences here.

Let us begin with the *multiplicatio specierum*. The basic description of the process matches that of *De mente*: “[B]etween the perceptible object and the senses there has to be a medium through which the object can multiply a form or a sign of itself”⁶⁴. In the *Compendium*, however, Cusanus goes beyond merely stating this claim, providing further information. First, he distinguishes different levels of precision or richness *species* can come in:

[C1] [Y]ou must take note of the fact that a perceptible sign (*signum*) is confused and generic prior to becoming proper and specific. For example, the sign of a word is, first of all, the sign of a sound—when the vocalization is heard by those who are far off. Thereafter, when it is heard at closer range, it becomes the sign of an articulated sound, which we call a voice. Next, when it is still closer, it becomes the sign of a voice belonging to a language. Finally, it becomes the sign of a specific word. The case is similar regarding all [perceptible signs].⁶⁵

While this statement could be seen as an interesting example of Nicholas trying to do justice to the different levels of richness experienced in sense perception, it raises questions. How is the loss of richness over distance to be explained? It is not plausible to posit the emission of different *species* to account this—differently rich *species* would have to be emitted by the same object to a perceiver after some sort of distance calculation on the object's end. It is as implausible to attribute the loss of richness to the perceiver; the *mens*⁶⁶ engaging with *species* would have to perceive the same *species* more or less richly depending on the distance it travelled. It would thus have to ignore some of the richness the *species* nonetheless contains,

⁶⁴ NICOLAUS CUSANUS, *Compendium* c.4 n.8, ed. K. BORMANN et B. DECKER, in *Nicolai de Cusa Opera Omnia, iussu et auctoritate Academiae Litterarum Heidelbergensis ad codicum fidem edita* (h XI/3): “[O]portet inter sensibile obiectum et sensum esse medium, per quod obiectum speciem seu signum sui multiplicare possit”. Cusanus uses ‘species’, ‘signum’, and ‘similitudo’ synonymously in the *Compendium*. The *species*-sign connection is probably of Baconian origin (with Augustinian influences); on this, cf. K.H. TACHAU, *Vision and Certitude in the Age of Ockham*, 17-20.

⁶⁵ NICOLAUS CUSANUS, *Compendium* c.5 n.11, ed. K. BORMANN et B. DECKER: “Oportet autem, ut advertas quomodo signum sensibile est prius confusum et genericum quam proprium et specificum. Sicut signum verbi est prius signum soni, dum vox a remotis auditur; deinde dum propinquius auditur, fit signum soni articulati, quod vox dicitur; post adhuc propinquius fit signum vocis alicuius linguae; ultimo fit signum specialis verbi; sic de omnibus”.

⁶⁶ Referring to what he mainly calls ‘mens’ in *De mente*, Cusanus uses ‘mens’, ‘intellectus’, and ‘intelligentia’ in the *Compendium*. As the latter two can also be used more narrowly to refer to specific epistemic capacities in contrast to other such capacities, context again plays an important role when interpreting given passages of text (cf. footnote 24). Cf. C. KNY, *Kreative, asymptotische Assimilation*, 281-286 for terminological discussions regarding ‘intellectus’ we cannot go into here. For coherence's sake, we mostly use ‘mens’ in this paper.

and there is no reason for blurred perception when the encountered *species* allow for clarity. One possibility remains: what arrives at a perceiver has to be less rich than what is emitted by a sensory object depending on the distance it has to travel. How then, is this to be understood?

The best way to make sense of this seems to be that Cusanus conceives of *species* as corporeal entities, which as the result of their traveling through a material medium lose some of their causal efficacy.⁶⁷ Were the *species* to have spiritual or intentional being, then the distance to the perceiver would play no role whatsoever. Yet Cusanus himself does not appear to be interested in the specifics of what he is suggesting; the conclusion he draws from [C1] does not go beyond stating that there are different signs of one object.⁶⁸ An interesting follow-up to this issue of the nature of the *species* is that it seems to provide further insight into why the presence of the corporeal spirit is required to quick-start or trigger the activity of the perceptual power. If that power is understood as an aspect of the mind, then it would be difficult to explain how a corporeal *species* could directly lead to mental activity without any intermediary. Yet if there is a corporeal *spiritus* used as an instrument by the *mens*, then there can be a corporeal interaction between the *species* and this *spiritus*, and the *mens* can notice the change in the *spiritus* as she uses it as an instrument.⁶⁹ In fact, that provides an explanation for why the mind moved the corporeal spirit towards the sense organs. Following Spruit,⁷⁰ we should read Cusanus as suggesting that the mind is receptive of the *species* from the object only if its instrument for sensing, the corporeal spirit, is animated and directed to the sense organs. But this aspect just tells us about the ontological status of the *species* and nothing about their nature qua representations of external things. That comes next.

Nicholas considers in some more detailed fashion which information is contained in these different signs. We find this in the passages following [C1]:

[C2] [S]ince the perfection of signs admits of degrees, it will never be the case that any sign is so perfect and specific that it cannot be more perfect. Therefore, there is no givable sign of singularity, which does not admit of degrees. And so, what is singular is not knowable through itself (*per se*) but only by accident (*per accidens*).⁷¹

[C3] [O]f this singular quality there cannot be a singular natural sign (*signum*) or form (*species*) because nothing singular is replicable or multiplicable, be it a substance or a quantity or a quality. So although there is a form and sign of quantity, there is none of this quantity. Therefore, quantities are individually taken note of, and known, by means of a sign of general quantity. In this way, [instances of] red [are known] individually by means of a sign of universal redness.⁷²

⁶⁷ Such a material understanding of *species* was used, for instance, by Peter John Olivi, as an objection to the existence of *species*. On this, cf. J.F. SILVA and J. TOIVANEN, “The Active Nature of the Soul in Sense Perception: Robert Kilwardby and Peter John of Olivi”.

⁶⁸ Cf. NICOLAUS CUSANUS, *Compendium* c.5 n.11, ed. K. BORMANN et B. DECKER.

⁶⁹ The existence of a mediatory corporeal spirit is often assumed by medieval thinkers. On this cf. for example J.J. BONO, “Medical Spirits and the Medieval Language of Life”, in *Traditio* 40 (1984), 91-130. An important source for this discussion is Costa ben Luca; see J. WILCOX, *The Transmission and Influence of Qusta Ibn Luqa's 'On the Difference between Spirit and Soul*, New York 1985. Generally, positing such a spirit raises ontological questions regarding the relation between body and soul or mind. A corporeal spirit is an intermediary can be seen as an attempt of dualistic accounts to close the gap between the material and the immaterial. However, one can object that by positing a corporeal spirit that gap is only moved instead of closed. Instead of a gap between the body and the soul or mind, now a gap between the *corporeal* spirit and the soul or mind has to be accounted for. As we are not concerned with Cusanus' take on the soul-body relation in this paper, we do not go into this issue and simply examine the corporeal spirit's role in sense perception as it is described by Cusanus.

⁷⁰ Cf. L. SPRUIT, *Species intelligibilis*, 22.

⁷¹ NICOLAUS CUSANUS, *Compendium* c.5 n.11, ed. K. BORMANN et B. DECKER: “Cum [...] perfectio signorum recipiat magis aut minus, nullum signum umquam erit ita perfectum et speciale, quin possit esse perfectius. Singularitatis igitur, quae non recipit magis et minus, nullum est dabile signum. Et ideo tale non est per se cognoscibile, sed per accidens”.

⁷² NICOLAUS CUSANUS, *Compendium* c.5 n.13, ed. K. BORMANN et B. DECKER: “[N]ec huius singularitatis

Two specifications regarding the information made available through the *multiplicatio specierum* can be found here. First, according to [C2], there is no *species* of what exactly something is as the singular thing or being it is. A *species* is a multiplication of something, and what is singular could not be multiplied without ceasing to be singular.⁷³ Cusanus does not consider that singular sources could simply emit imperfect *species* of themselves. Instead, second, he adds another layer of complexity. As stated in [C3], he takes the accidents of a singular entity, as *these* accidents of *this* entity, to be singular as well. Not just of substances—in [C3], the terminological pair of *substantia* and *accidens* alluded to in [C2] is completed—there cannot be *species*; nothing singular can be multiplied as it is, and the accidents of singular entities are also singular. Yet while singular accidents cannot be multiplied in their singularity, there can be universal *species* of them, and these are what perception revolves around.

The explanatory route Cusanus takes does not seem to be a route he necessarily has to take. It has its benefits, however. By making the accidents of an entity emit the *species* relevant for perception, the different senses can receive different *species* from which then a unified sign of the substance they are accidents of can be composed by a power able to do so. This provides a reason why there are different senses in the first place.⁷⁴ It also depicts perception in a way that fits nicely into the bigger epistemological picture Cusanus works with: he can characterise perception as a process of asymptotic approximation in which—depending on the amount of *species* involved—something can be perceived better or worse, but never perfectly. If something is mistaken for something else, this is due to not enough *species* being employed to differentiate between different entities with (partly) similar accidents.⁷⁵ The *multiplicatio specierum*, or at least its starting point, is therefore described in a significantly higher degree of complexity than in *De mente*: *species sensibiles* are universal *species* of singular accidents of singular entities.

The second area in which the *Compendium* provides more material than *De mente* concerns the interaction between a perceiver and the *species sensibiles*. Cusanus describes this interaction as one between a *forma formans* and a *forma informans*.

[C4] In order to see that the sensitive soul is not the intellect but is the intellect's likeness (*similitudo*) or image, take note of the fact that in the one who sees there are two forms (*formae*)—one that informs and is a likeness of the object and another that forms and is a likeness of the intellect [...]. In the one who sees, then, there are two likenesses—the one being of the object and the other being of the intellect. Without these likenesses no seeing occurs. The likeness of the object is superficial and extrinsic; the likeness of the intellect is central and intrinsic. The likeness of the object is the instrument of the likeness of the intellect. Therefore, the likeness of the intellect perceives or knows by way of the likeness of the object.⁷⁶

quantitatis signum seu species naturalis potest esse singularis, cum nullum singulare sit plurificabile aut multiplicabile, sive sit substantia aut quantitas aut qualitas. Licet igitur quantitatis sit species et signum, non tamen ut huius quantitatis. Singulariter igitur quanta signo generalis quantitatis notantur et cognoscuntur. Ita singulariter rubea signo universalis rubedinis”.

⁷³ Cf. also NICOLAUS CUSANUS, *Compendium* c.4. n.8, ed. K. BORMANN et B. DECKER in this regard.

⁷⁴ The systematic alternative would be to say that any singular entity emits just one, imperfect, *species* which contains all the information pertaining to it. Then, through the different senses, different aspects of this *species* would be singled out and afterwards re-composed into a unified sign of the emitting entity. While this model would reduce complexity regarding the object emitting *species* and the *species* it emits, it would lead to explanatory problems when it comes to perceivers. Why, for example, should an already complete *species* be first split into different sensory pieces and then be put together again? If complete *species* were emitted, then there would be no reason for different senses, from an ontological point of view, calling into question the efficiency of natural beings and processes as created by god.

⁷⁵ Cf. NICOLAUS CUSANUS, *Compendium* c.5 n.15, ed. K. BORMANN et B. DECKER for this latter point.

⁷⁶ NICOLAUS CUSANUS, *Compendium* c.11 n.35, ed. K. BORMANN et B. DECKER: “Et ut videas animam

To begin with, Cusanus clearly conceives a *species sensibilis* as a *medium quo* here—the likenesses of external objects he is talking about in [C4] cannot be anything but *species sensibiles*, and they are described as tools to perceive what they are likenesses of. [C2] and [C3] show the same tendency; Cusanus does not talk about the perception of signs, but about the perception of something through these signs. What exactly the object of perception is can thus, in contrast to *De mente*, be answered with less ambiguity for the *Compendium*: we perceive a thing the likeness of which is made present to the senses, exciting the mind to activate its perceptual capacities.⁷⁷ Furthermore, Cusanus points out that he does not understand sense perception as a one-way process, just like the passages from *De coniecturis* indicated. *Forma formans* and *forma informans* both have to fulfil specific forming roles in order for an act perception to come about. The latter provides information about the sensory object it is a likeness of, the former makes use of the information provided to perceptually get hold of the sensory object it is being informed about. The mind needs the sense organ and the likeness that represents the object,⁷⁸ but there is no perception without the mind performing its operation.

With that, eventually, it is time to move on to the passage on the (sensitive) soul at the end of the *Compendium*. First, in contrast to *Idiota de mente*, Cusanus talks about only one medium relevant for perception in this passage:

[C5] [T]he sensitive soul must enliven the air that is associated with it in order to perceive [...] in air that is rarefied and transparent, the *species* of what is visible; in ordinary air, the *species* of sound; in dense and changed air, the *species* that are related to the other senses.⁷⁹

He does not elaborate on why air seems to have become the only medium. But there still needs to be a medium for the *species* to get to perceivers and Nicholas now talks about different types of air instead of different elements as the medium, so there is not really a structural change to what he describes in *Idiota de mente*.

Second, Nicholas seems to undermine the notion of the *mens* actively engaging with *species* and thus perceiving.

[C6] [A]ir serves as a body for our sensitive spirit's life. By means of air the sensitive spirit enlivens the whole [human] body and perceives objects [...]. Perceiving is a certain undergoing (*sentire quoddam pati est*). Therefore, the [perceptual] form acts upon the just-mentioned instrumental body.⁸⁰

Still in the context of the new emphasis Nicholas puts on air—not only as the medium

sensitivam non esse intellectum, sed eius similitudinem seu imaginem, attente quomodo in vidente duplex est forma, una informans, quae est similitudo obiecti, alia est formans, quae est similitudo intelligentiae [...]. In vidente igitur duae sunt similitudines, alia obiecti, alia intelligentiae, sine quibus non fit visio. Similitudo obiecti est superficialis et extrinseca, similitudo intelligentiae centralis et intrinseca. Similitudo obiecti est instrumentum similitudinis intelligentiae. Similitudo igitur intelligentiae mediante similitudo obiecti sentit seu cognoscit”.

⁷⁷ In the *Compendium* as well statements can be found that could be read as Cusanus treating the *species* as a *medium quod* (cf. [C8] below). However, the tendency is clearly that perception is about the objects emitting *species* and not about the *species* themselves.

⁷⁸ Looking back at *De mente*, this is made very clear in NICOLAUS CUSANUS, *Idiota de mente* c.4 n.77, ed. R. STEIGER.

⁷⁹ NICOLAUS CUSANUS, *Compendium* c.13 n.39, ed. K. BORMANN et B. DECKER: “Oportet igitur animam sensitivam aerem vivificare sibi coniunctum, ut [...] in aere vivo diaphano et subtili speciem visibilis, in communi speciem soni, in ingrossato et immutato species aliorum sensuum”.

⁸⁰ NICOLAUS CUSANUS, *Compendium* c.13 n.39, ed. K. BORMANN et B. DECKER: “Aer igitur corpus vitae spiritus nostri sensitivi exsistit, quod mediante vivificat totum corpus et sentit obiecta [...]. Sentire quoddam pati est. Agit igitur species in corpus organicum iam dictum”.

through which *species* travel, but also as the “body” the corporeal spirit uses—, this very much sounds like the *species* not just causing an *excitatio*, but perceptually determining a perceiver.⁸¹ It has to be noted, however, that Cusanus does not claim that the *species* act upon the *mens* itself. Rather, they act upon the body which is vivified by the *mens* through the corporeal spirit, and this is compatible with what Cusanus describes in the passages discussed so far. The corporeal spirit being understood as an instrument of the *mens*, according to Cusanus, therefore does not collide with the Aristotelian definition of perception as the affection of an organic body. However, and this is essential to notice, the Aristotelian definition does not suffice to explain perception for Cusanus:

[C7] But the [sensitive] soul [...] does not know unless it pays attention. Therefore, it always has an enlivening power and a cognitive power, both of which it uses (when motivated) in order to pay attention. In the sensitive soul, then, there is (in addition to an enlivening power) a certain cognitive power [...].⁸²

In this passage, Cusanus also states the cooperation of different powers of the *mens* once again; both vivifying and cognitive powers are employed in sense perception. Something else is more noteworthy here, though. Already in *Idiota de mente* ([DM1]), Cusanus talks about a turning of the *mens* when an *excitatio* takes place. Now, he describes this turning in terms of attention—only if the acting of a sensory object upon a body catches the attention of the *mens*, perception can take place. After an example of sun rays passing through coloured glass, Cusanus provides more information about the attention introduced in [C7]:

[C8] [T]he sensitive soul, which enlivens the transparent medium, [...] perceives that the altogether uncoloured surface of its transparent medium is imbued with a likeness. And turning toward the object from whence the brightness comes, it knows the object by means of the brightness that it senses on the surface of its own transparent body. Accordingly, since no seeing occurs unless the one who sees attends to the brightness, or *intentio* (for example, we do not notice passers-by if we are inattentive), it is evident that seeing arises from both the *intentio* of the colour and the *attentio* of the perceiver.⁸³

On the one hand, this confirms two of the points (repeatedly) made by now. The *species* emitted by sensory objects (1) interact with the perceiver on the “surface” of the medium vivified by the corporeal spirit—air in the sensory organs, as Nicholas spells it out in the *Compendium*; the sensory organs as reached by the corporeal spirits through blood vessels, as he spells it out in *Idiota de mente*. Perception is (2) something that can only come about if an object’s impact (here: *intentio*) and a perceiver’s perceptual activity (through *attentio*) are both given.

On the other hand, a look back at both *Idiota de mente* and *De coniecturis* makes sense here: In the *Compendium*, Nicholas describes the *mens* as always active (text [9]) and makes a distinction between an inattentive and an attentive state of the *mens* (text [10]). The example used to point out the latter is that of passersby not being perceived without *attentio*. This,

⁸¹ Cusanus seems to bring in this notion of perceptual determination by referring to Aristotle’s definition of perception in [C6] (“sentire quoddam pati est”). Cf. ARISTOTELES, *De anima* II c.5 (416b33).

⁸² NICOLAUS CUSANUS, *Compendium* c.13 n.40, ed. K. BORMANN et B. DECKER: “Anima autem [...] non cognoscit, nisi attendat. Est igitur virtutis semper vivificativae et cognitivae, qua utitur, quando movetur, ut attendat. Est igitur in ipsa anima sensitiva ultra virtutem vivificativam quaedam potentia cognitiva [...]”.

⁸³ NICOLAUS CUSANUS, *Compendium* c.13 n.41, ed. K. BORMANN et B. DECKER: “Anima igitur sensitiva, quae vivificat diaphanum [...], [s]entit [...] enim diaphani eius superficiem penitus incoloratam in similitudine tingi, et se convertens ad obiectum, unde splendor vernit, medio illius splendoris, quem in superficie corporis sui diaphani sentit, obiectum cognoscit. Unde, cum non fiat visio, nisi videns attendat ad splendorem seu intentionem – praetereuntes enim, si non sumus attenti, non videmus –, patet quod visio ex intentione coloris et attentione videntis oritur”.

firstly, picks up the example of the passerby from *De coniecturis* ([DC2] in the previous section) and spells out what is only implied in the earlier text: with texts [9] and [10], Nicholas also makes room for cases in which the acting of a sensory object upon a perceiver does not lead to an *excitatio* at all and thus not to perception. As long as the *mens* is inattentive, there simply is no perception, despite there being affection of the sense organs, according to what is stated here—perception is only spoken of when there is (1) interaction between perceiver and perceived, which both provide necessary, but in themselves not sufficient conditions for acts of perception; and (2) awareness by the soul of that interaction (or, to be more precise, of the object initiating that interaction). Secondly, [C8] makes clear that a *mens* is not inactive until it experiences an *excitatio*; it is merely inattentive. In *De mente*, Cusanus does not specify whether the enlivening of the corporeal spirit is a conscious or a subconscious process. In the *Compendium*, the situation is clear: it has to be both. It is subconscious process as long as the *mens* is inattentive—therefore, it is possible to not notice a passerby—and becomes conscious with the *mens* becoming attentive—if a passerby causes an *excitatio*, then the *mens* consciously perceives the external thing causing the *excitatio*.

In the *Compendium*, to summarise, while offering an account of sense perception that is coherent with those examined so far, Cusanus provides additional information in two main areas: he fleshes out the *multiplicatio specierum* that is simply taken for granted in *De mente* and he states that there are two levels of attention involved in perception, shedding light on how the *mens* enlivens the corporeal *spiritus*. Furthermore, Cusanus is quite clear regarding the (primary) object of perception in the *Compendium*—a *species sensibilis* is described as a *medium, quo*. Given the coherence of the accounts of sense perception in the *Compendium* and *De mente*, it is valid to use this as confirmation that the same is the case in *De mente*. Finally, there is a difference between the *Compendium* and *De mente* when it comes to the medium through which the *species sensibiles* are transmitted. In the former, Cusanus talks only about air as this medium, in the latter he makes use of all elements. As he describes different types of air in the *Compendium* with properties matching those of the elements as described in *De mente*, however, this has no impact on the systematic coherence of the accounts of perception in the two works.

II. Cusanus on Rational Perception

Having thus concluded our examination of key texts concerning sense perception in Cusanus' works, we can proceed to the systematic evaluation of our results.

We begin by briefly describing the model of perception presented in these texts. According to Cusanus, two necessary conditions must be met in order for sense perception to come about. First, an object of perception has to make itself present to a perceiver in such a way as to make the triggering of a perceptual episode possible. Cusanus calls this an '*excitatio*' and describes it in a perspectivist framework as *species sensibiles* bodily affecting a perceiver when they arrive in sense organs. By impeding the motion of the corporeal *spiritus* used by the perceiver's *mens* to enliven the body, the *species* catch the perceiver's attention. Second, once attentive, a perceiver engages with a sensory object by means of the *species* responsible for the *excitatio*. This engagement is not described as the perceiver being cognitively determined by the *species* affecting her. Rather, according to Cusanus, it is the perceiver's *mens* that assimilates itself to a sensory object by means of the *species* this object emits and by using the bodily *spiritus* as an instrument of its action. Cusanus thus describes perception as a process in which perceivers and objects of perception join forces, one providing the *what* of perception (the external things) and the other the *how* of perception (the attentional state). If either of the two requirements is not met—because no *species* affect a perceiver or because a perceiver fails to engage with a sensory object through the *species* it emits—, there simply is

no perception.⁸⁴

To account for the content of perceptual experience, however, it is not sufficient that a perceiver is merely put into a certain attentional state by a combination of the action of external objects and the perceiver's own initiative. This would imply that what is taken in through the senses yields the information it contains in a way that no "decoding" is necessary—once the information is there and the perceiver is aware of it, the perceiver would not have to *do* anything in order to access the information. Cusanus clearly opposes such a notion of sensory intake. According to him, the information *species sensibiles* are carrying has to be ordered or structured to become perceptual content. While Cusanus is not terribly clear as to what that 'structured information' is, it is at least clear that this information is the result of the joint action of the perceiver's sensory and cognitive powers, which we qualify as cooperation directed by the higher power of reason. This 'directed cooperation' is an expression of the activity of the mind in perception that characterises Cusanus' philosophy.

This leads us to the main question we want to discuss in this section: what exactly does it mean that perception is rational, according to Cusanus? Does the rational activity relevant for perception take place *after* indeterminate sensing, *concurrently* with indeterminate sensing or does it *transform* indeterminate sensing? From the textual evidence collected in the first two sections, we can confidently deny that the rational activity relevant for perception takes place *after* indeterminate sensing.⁸⁵ That leaves two possibilities: (a) rational activity is *concurrent* with indeterminate sensing or (b) rational activity *transforms* indeterminate sensing.

The language in *De coniecturis* and parts of *De mente* could be seen as suggesting (b), that is to say if the *ratio* is *in* the senses and if that means bringing discrimination into indeterminate sensing, then it seems like the *ratio* transforms the senses when it is *in* them. What speaks against such a reading is that Cusanus maintains the distinction between the specifics of sensing (indeterminacy) and rationalising (order, conceptualisation, discrimination). He does not claim that due to the *ratio* joining the senses, the senses acquire the ability to discriminate, for example. The senses still provide indeterminate content, and the *ratio* remains the discriminating power; they just work together. Cusanus does not talk about the *ratio* transforming the senses, he talks about the *mens* doing in different epistemic "environments" what is possible within these environments. If sense perception is to yield more than indeterminate content, Cusanus holds, then the rational activity of discrimination and ordering has to "join" it. This makes (a) the more plausible interpretation.

The follow-up question then is: how is this concurrence to be understood? To answer this question, one has to look at how Cusanus describes the mental processes taking place after an *excitatio* has occurred—we can skip the processes leading up to the *excitatio* here, as the *mens* becomes perceptually active only when woken up to (conscious) attention through an *excitatio*.⁸⁶ In *De mente*, Cusanus states that what characterises the mind is its capacity of being a conforming and configuring power.⁸⁷ Conformation, in the case of sense perception, consists in the exercise of two particular powers of the mind. By means of its sensory power(s), the information carried by *species* is grasped indiscriminately; to this end, the *mens* makes use of different arterial spirits as instruments for different senses. By means of its rational power, the *mens* discriminates and orders what the senses grasp indiscriminately. Employing both sensory and rational powers, the mind reacts to an *excitatio* by *assimilating*

⁸⁴ Our examination in the first section of this paper shows that the core assumptions of this model are stable from *De coniecturis*, one of Cusanus' first works, to the *Compendium*, one of his last works. Which components of this model are emphasised differs between the works due to the differences in what these works are focused on. As they remain components of one model, however, the works complement each other—despite the fact that, at first sight, the shifts in terminology characteristic of Cusanus might seem to suggest the opposite.

⁸⁵ Cf. p. 7-10, 13sq., and 19 above.

⁸⁶ Regarding the *excitatio*, cf. p. 7sq. above. For the passages on the mind be woken up in *De coniecturis* and *De mente*, cf. footnotes 8, 43.

⁸⁷ Cf. footnote 26.

itself to the external thing presented, judging what it finds itself confronted with.⁸⁸ The result of perceptual assimilation is the production of conceptual(ised) content by bringing the coarse information provided by the senses under the ordering effect of the *ratio*. In *De coniecturis*, this ordering effect is described in terms of unity—the multiplicity or alterity of what is sensible is “lifted” into the more unified state of the *ratio*—, and this thought is still present in *De mente*.⁸⁹

Concurrence therefore does certainly not mean that rational discrimination and indeterminate sensing run along independently next to each other—they are much more closely and intricately connected. While the senses are not transformed into something else by the *ratio*, rationality is an integral part of perception. There are different aspects to the order and unification it contributes to perception. First, they consist in the activity of a power of discrimination, which discriminates between the likeness (“an intervening thing”) of the external thing in the eye and the external thing itself.⁹⁰ According to Cusanus, this power of discrimination brings with it also the capacity for inference, of a low kind, and as such is found in “highly developed non-rational animals”⁹¹. This reference is clearly to a discussion that is found in Roger Bacon, among others, in the thirteenth century, and which explains why these kinds of animals are capable of, like Nicholas remarks, recognising their owners. As a result, there is a sense in which they could be said to have reason, but only in an equivocal way.

But Cusanus also adds, second, that such a power of discrimination found in non-rational animals is of a different kind than that found in human beings. In the former, it is not associated with the intellect, and thus lacks focus and acuity. In the case of the latter, human beings, the power of discrimination is exercised in an intellectually informed way; this means that it not only *infers* but *knows what it infers*. We take this to mean that non-rational animals are able to see their owner *qua* it being familiar to them, whereas human beings are able to know that they perceive (they are able to discriminate between instances of perceiving)⁹² and what the thing they perceive is. The difference between human and non-human animals, according to the passage in question, is a distinction between intellectually informed rationality and uninformed reasoning.

To return to the original question, we can say that for Cusanus, in human beings, the operation of the mind in perception is constituted by the assimilation to external things upon being aroused by their presence and the result is at the first level the production of forms of things,⁹³ and at a second level, but *concurrent with the first*, discrimination, that is judgement combined with inferential reasoning.⁹⁴ Not only are we aware *that* we perceive but also *what* we perceive—the content (the what) of that perceptual experience having a conceptual nature, as has been made clear before. It has to be kept in mind, in line with Cusanus’ theory of cognition, that these concepts are ‘conjectural’ and thus subject to uncertainty as the true nature of things not created by the human *mens* is inaccessible to the human *mens*. This is the inherent nature of human perception, and of human knowledge in general.⁹⁵

There is a final issue we must turn to, concerning the way in which perception is to be understood as active or passive. Our presentation of Cusanus’ view, especially in this last section, has emphasised the active role of reason to shape any perceptual experience, but we cannot forget the role of objects that via their *species* excite the soul to perception. How to understand these potentially conflicting claims? One way is to focus on what Cusanus says

⁸⁸ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.4 n.77sq., ed. R. STEIGER.

⁸⁹ Cf. for example NICOLAUS CUSANUS, *Idiota de mente* c.4. n.75, ed. R. STEIGER.

⁹⁰ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.5 n.82, ed. R. STEIGER.

⁹¹ NICOLAUS CUSANUS, *Idiota de mente* c.5 n.82, ed. R. STEIGER.

⁹² NICOLAUS CUSANUS, *Idiota de mente* c.5 n.84, ed. R. STEIGER.

⁹³ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.7 n.99, ed. R. STEIGER.

⁹⁴ Cf. NICOLAUS CUSANUS, *Idiota de mente* c.7 n.100, ed. R. STEIGER.

⁹⁵ Cf. footnote 13.

about the nature of assimilation and the conditions for it taking place. We have seen above how he emphasises the initiating role of the mind moving the corporeal spirit, which makes the reception of the *species* in the sense organ have a cognitive import. At the same time, he emphasises that at the level of the mind it is also its assimilative nature that makes the object cognitively significant. What we make of what he means with this is well illustrated by Cusanus' take on the Aristotelian seal-wax analogy:

Hence, that subtle arterial spirit, which is enlivened by mind, is fashioned by mind into a likeness of the [perceptual] form, which has presented [itself as] an obstacle to [this] spirit's motion. Analogously: by a man who has both the use of his mind and the skill, a pliable slab of wax is molded into the shape of the object that actually has presented itself to [this] artisan. Without mind no configuration can be made [...]. Rather, it is mind that marks the boundaries of all things.

Therefore, suppose that a slab of wax were conceived of as being informed with a mind. In that case, *the mind existing within the wax would configure the wax to every shape* presented to that mind.⁹⁶ (emphasis added)

What is most important to our purposes in this passage appears in the second paragraph (starting with 'Therefore').⁹⁷ It shows—unequivocally, in our understanding—that Cusanus takes the assimilative power of the mind, *qua* principle of life of the body, to be the explanation of how we are able to perceive and why we perceive the way we do. Perception depends on objects presenting themselves by means of *species* as representative intermediaries carrying information. The mind does not create perceptual content *ex nihilo*, it assimilates itself to what is presented to it. Yet perceptual assimilation is, as Cusanus' take on the wax metaphor clearly shows, a activity of the mind in which its rational and sensory powers are employed concurrently. Such an assimilation cannot be but conceptual for human beings.

III. Conclusion

In this article, we presented the first interpretation of Nicholas of Cusa's theory of perception based on a thorough analysis of key texts. Our interpretation yields two main claims: first, even if this may not always be clear on the textual surface, Cusanus' account of perception is well-grounded in the philosophical tradition on the issue, be it the Augustinian take on the mind or the perspectivist doctrine of the *species*. Second, according to his conception of perceptual experience, it is permeated by reason; reason discriminates and structures the incoming sensory content that is made available to the perceiver by means of sensible *species*.

In Cusanus, the activity of the mind—enlivening the corporeal spirit and bringing its structuring-ready rational capacity to bear on the sensory content—should be understood in the light of Augustinian sources. This is particularly clear in the case of the *excitatio* that triggers the mind to perceptual action and the metaphor of the mind-informed-wax that he presents to illustrate that assimilation consists in the mind structuring the sensory information

⁹⁶ NICOLAUS CUSANUS, *Idiota de mente* c.7 n.100sq., ed. R. STEIGER: "Unde spiritus ille subtilis arteriarum, qui est mente animatus, per mentem ad similitudinem speciei, quae obstaculum praestitit motui, spiritui sic conformatur sicut cera flexibilis per hominem mentis usum ac artem habentem configuratur rei praesentialiter artifici praesentatae. Nam omnes configurationes [...] absque mente fieri nequeunt; sed mens est, quae omnia terminat. Unde si conciperetur cera mente informata, tunc mens intus existens configuraret ceram omni figurae sibi praesentatae".

⁹⁷ On the living wax metaphor and its clear Augustinian origin, as found in Robert Kilwardby, John Pecham, Peter John Olivi, and Roger Marston, see J.F. SILVA, "The Chameleonic Mind".

at the occasion of the presence of the external thing to the senses. The second case where the influence of a preceding theory is felt is on the function of discrimination assigned to the *ratio*. The notion of discrimination as described by Cusanus is strikingly similar to the one found in authors belonging to the perspectivist tradition, even if within that tradition we find disagreements concerning the rational or non-rational nature of that power. Further research will certainly allow for a clarification of the extent of these influences, but for our purposes in this article it suffices to show how Nicholas managed to combine with great acuity elements that bespeak for the active nature of the mind in perception. By doing this he plays an important and significant role in the development of theories of perception.

Perhaps more astonishing, however, is the way he puts these theories to use. Even if the explanatory framework of his account of perception is different from ours, Cusanus manages to capture and explain a tension in perceiving (and cognition in general, for that matter) that features prominently in how we experience it in our daily lives: on the one hand, we simply perceive things with the self-assurance of perception generally getting things “right”. Theories of perception (try to) spell out how this works. On the other hand, there are countless situations in which this self-assurance is undermined—we are not sure what we just heard or saw or touched; we mistake something for something else; when perceptually engaging with something more closely, we start noticing aspects we were not aware of before. We do not lose our trust in our perceptual capacities, but we may well ask ourselves whether we can ever fully grasp anything. Framing perception (and cognition in general) as asymptotic assimilation, Cusanus provides a theory about perceptual experience and the world it is the experience of, rather than just a theory about the faculty-psychology model of the soul explaining that experience in a certain detachment from the world we experience.